

AMENDMENTS TO THE CLAIMS:

The present Amendment has been prepared in accordance with a revised format established by the U.S. Patent and Trademark Office, as permitted in the Pre-OG Notice entitled "Amendments in a Revised Format Now Permitted."

Please amend Claims 1, 9, and 10 as follows. In accordance with the revised amendment format, all claims are presented below.

- Sub
Cl
1. (Currently Amended) An ink jet recording head comprising:
- a flat substrate having an end face and front and back flat main surfaces, said front and back flat main surfaces having a larger area as compared to the end face;
 - a wiring electrode connected to an energy generating member formed on the front flat main surface of the substrate, said energy generating member generating energy to be utilized to discharge ink from a discharge port formed on the front flat main surface of the substrate;
 - a stepped surface provided at an end of the substrate and provided lower than the front flat main surface;
 - a connection electrode electrically connected to the wiring electrode and provided on the stepped surface;
 - an electrical wiring member superimposed on the connection electrode and electrically connected to the connection electrode through a bump electrode to supply an electrical signal or an electrical power to the connection electrode; and

a sealing member for electrically conductively sealing and covering the connection electrode, the bump electrode, and the electrical wiring member on the stepped surface, wherein said sealing member does not extend beyond the discharge port with respect to the front flat main surface.

2. (Previously Amended) The ink jet recording head according to claim 1, wherein the substrate is an insulation substrate made of a single crystal Si material, and wherein a pattern on a surface of the substrate is formed by anisotropic etching.

3. (Previously Amended) The ink jet recording head according to claim 2, wherein said stepped surface is located in an area of the substrate that becomes thinner in a stepwise fashion in a vicinity of the end face.

4. (Previously Amended) The ink jet recording head according to claim 3, wherein a surface of said stepped surface is parallel with the front flat main surface of the substrate.

5. (Withdrawn)

6. (Withdrawn)

7. (Original) The ink jet recording head according to claim 1, wherein the energy generating member is an electrothermal converting element for generating thermal energy.

8. (Original) The ink jet recording head according to claim 1, wherein the discharge port is disposed so as to face the energy generating member.

9. (Currently Amended) An ink jet recording apparatus comprising:
an ink jet recording head having:
a flat substrate having an end face and front and back flat main surfaces, said front and back flat main surfaces having a larger area as compared to the end face;

a wiring electrode connected to an energy generating member formed on the front flat main surface of the substrate, said energy generating member generating energy to be utilized to discharge ink from a discharge port formed on the front flat main surface of the substrate;

a stepped surface provided at an end of the substrate and provided lower than the front flat main surface;

a connection electrode electrically connected to the wiring electrode and provided on the stepped surface;

an electrical wiring member superimposed on the connection electrode and electrically connected to the connection electrode through a bump electrode

to supply an electrical signal or an electrical power to the connection electrode;

a sealing member for electrically conductively sealing and covering the connection electrode, the bump electrode, and the electrical wiring member on the stepped surface, wherein said sealing member does not extend beyond the discharge port with respect to the front flat main surface; and

a member on which the ink jet recording head is mounted.

10. (Currently Amended) A method for sealing an electrode of an ink jet recording head, said ink jet recording head comprising a flat substrate, said flat substrate having an end face and front and back flat main surfaces, said front and back flat main surfaces having a larger area as compared to the end face, said ink jet recording head further comprising a wiring electrode connected to an energy generating member formed on the front flat main surface of the substrate, and an ink discharge port located above the front flat main surface, said method comprising the steps of:

providing a stepped surface at an end of the substrate such that the stepped surface is lower than the front flat main surface;

providing, on the stepped surface, a connection electrode electrically connected to the wiring electrode;

providing an electrical wiring member superimposed on the connection electrode and electrically connected to the connection electrode through a bump electrode to supply an electrical signal or an electrical power to the connection electrode; and

Ref (epd) SWC

electrically conductively sealing and covering, with a sealing member, the connection electrode, the bump electrode, and the electrical wiring member on the stepped surface, wherein the sealing member does not extend beyond the discharge port with respect to the front flat main surface.
